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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,505	08/22/2003	Tomio Kumamoto	2297-0153P	8739
2292	7590	05/24/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			BLAU, STEPHEN LUTHER	
			ART UNIT	PAPER NUMBER
			3711	

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/645,505	Applicant(s) KUMAMOTO, TOMIO	
	Examiner Stephen L. Blau	Art Unit 3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,9 and 13 is/are rejected.
- 7) ☒ Claim(s) 1-4,6-8,10-12 and 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/22/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Throughout the specification there are numerous lines which have improper spacing (Page 2 Ln. 25, Page 3 Lns. 5, 22, Page 4 Lns. 2, 10, 23, Page 6 Ln. 25, Page 9 Ln. 14, Page 11 Ln. 16, Page 13 Ln. 11, Page 19 Ln. 19). The examiner recommends removing the right side justification when writing the disclosure to prevent this.

Appropriate correction is required.

Claim Objections

2. Claims 1, 9-10, and 14 are objected to because of the following informalities: Throughout the claims there are numerous lines which have improper spacing (Claim 1, Lns. 10-11, Claim 9 Ln. 7, Claim 10 Ln. 7 and Claim 14 Ln. 7). The examiner recommends removing the right side justification when writing the disclosure to prevent this.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Takemura.

Takemura discloses an intermediate-elasticity and high-strength carbon fiber reinforced resinous sheet having a modulus of elasticity 30-33 ton/mm² (294-323 Gpa), a tensile strength not less than 5000 Mpa (Claim 1 (b), Ref. No. 3), a low elasticity carbon fiber reinforced resinous sheet having a tensile modulus of elasticity of 5-10 ton/mm² (49-98.1 Gpa) (Claim 1 (c), Ref. No. 4) and a compressive breaking strain of not less than 2.0% (GranocXN-05 Tables 1-2) with both sheets being used to reinforce the tip side of a golf club shaft (Figs. 1-3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 5, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura.

Takemura discloses a low elasticity carbon fiber reinforced resinous sheet being extended as much as $\frac{3}{4}$ of the entire length of a shaft (Claim 1(c)), an intermediate-elasticity and high-strength carbon fiber reinforced resinous sheet extending the full length of a shaft (Figs. 1-3), a low elasticity carbon fiber reinforced resinous sheet disposed outward of an intermediate-elasticity and high-strength carbon fiber reinforced resinous sheet (Figs. 1-3) and a low elasticity carbon fiber reinforced resinous sheet and an intermediate-elasticity and high-strength carbon fiber reinforced resinous sheet having the same configuration in the form of being made with fibers and resin with the fibers aligned to the longitudinal direction of the shaft (Col. 10, Lns. 43-65). Takemura does not give the exact weights of the fibers but clearly an artisan skilled in the art of designing a shaft with a low elasticity carbon fiber reinforced resinous sheet being extended as much as $\frac{3}{4}$ of the entire length of a shaft would have selected suitable weights for the carbon fibers for each sheet in which a weight M1 of an intermediate-elasticity and high-strength carbon fiber and a weight M2 of a low-elasticity carbon fiber satisfy a relationship of $.5 \leq \text{a ratio of weight M1 to a weight M2} \leq 3$ is included.

Takemura lacks a weight M1 of an intermediate-elasticity and high-strength carbon fiber and a weight M2 of a low-elasticity carbon fiber satisfy a relationship of $.5 \leq \text{a ratio of weight M1 to a weight M2} \leq 3$.

It would have been obvious to modify the shaft of Takemura to have a weight M1 of an intermediate-elasticity and high-strength carbon fiber and a weight M2 of a low-

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elasticity carbon fiber satisfy a relationship of $.5 \leq$ a ratio of weight M1 to a weight M2 ≤ 3 in order to maximize the reinforcement of the carbon fibers for the reinforcement layer (Claim 1(c)) extending $\frac{3}{4}$ the entire length of the shaft.

Allowable Subject Matter

7. Claims 2-4, 6-8, 10-12, and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With respect to claims 2, 4, 6, 8, 10, 12, 14, and 16 none of the prior art discloses or renders as obvious an intermediate-elasticity and high-strength carbon fiber reinforced resinous sheet and a low elasticity carbon fiber reinforced resinous sheet being disposed from a tip to a position located at not more than 20 % of an overall length of a shaft. With respect to claims 3, 7, 11, and 15 none of the prior art discloses or renders as obvious an intermediate-elasticity and high-strength carbon fiber reinforced resinous sheet and a low elasticity carbon fiber reinforced resinous sheet having a length not less than 8 % nor more than 15 % of an overall length of a shaft.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712.


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The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Greg Vidovich whose telephone number is (703) 308-1513. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. (TC 3700 Official Fax 703-872-9306)

slb/ 19 May 2004


STEPHEN BLAU
PRIMARY EXAMINER